

**REMARKS/ARGUMENTS**

Reconsideration and continued examination of the above-identified application are respectfully requested.

Claims 2-6, 13, 15, and 26-68 were previously canceled. Claim 69 is currently amended to make a minor editorial correction and to clarify the claim. Support for the clarifying amendment can be found, for instance, at paragraphs [0022]-[0032] and Examples 2-5, at pages 21-25, of the present application. New claim 70 is added to recite features, which can be found, for instance, in original claims 17-23 and at paragraphs [0044]-[0047], [0050]-[0051], and [0060]-[0067] of the present application. Accordingly, no questions of new matter should arise and entry of this amendment is respectfully requested.

**Rejection of Claim 69 under 35 U.S.C. §112, first paragraph**

Claim 69 was rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Examiner stated that it is not clear the original specification teaches the claimed “after the effects of the morphology have been removed.” The Examiner indicated that clarification could be achieved by identifying the appropriate portion of the specification that supports these limitations. This rejection is respectfully traversed.

In response to the Examiner’s above-noted question, the present application supports the recitation “after the effects of the morphology have been removed” in at least paragraphs [0022]-[0032] and Examples 2-5, at pages 21-25. As explained in the present application, there are certain circumstances where a physical phenomenon which responds to both morphology and interfacial potential may be used to assign an interfacial potential property value to a particulate material. As described in paragraph [0030] of the present application, a physical phenomenon

having this characteristic may be used where one of the described conditions A), B) or C) is met. If one of the conditions A), B) or C) is not met, then a physical phenomenon which responds to both morphology and interfacial potential is removed from consideration in assigning the interfacial potential property value to the particulate material as part of the “measuring and obtaining ... and including” recitations of present claim 69. This is illustrated in Examples 2-5, at pages 21-25, and FIG. 1, of the present application, which show, in an exemplary manner, how to identify such effects of morphology for removal from consideration in assigning the interfacial potential property value of the particulate material. Thus, the “after the effects of morphology have been removed” language of claim 69 is understood from the supporting disclosures of the application to relate to a process of selecting (assigning) the interfacial potential property value to be used in the claimed method. Although not thought necessary for compliance with the written description requirement, claim 69 also has been amended to further clarify what is meant by the “after the effects of morphology have been removed” recitation by further stating that the effects of morphology have been removed “in said measuring and obtaining of said interfacial potential property value for any physical phenomenon that responds to both morphology and interfacial potential ...”. In view of at least the above, the language in claim 69 of the “effects of the morphology are removed” is supported by these teachings of the original application. Therefore, the claimed subject matter in question was and is described in the present application in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Accordingly, this rejection should be withdrawn.

**Rejection of Claim 69 under 35 U.S.C. §112, second paragraph**

Claim 69 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated that it is not clear what steps are intended by “after the effects of the morphology have been removed.” The Examiner asked whether the Applicant intends a processing step to remove some portion of the sample, and if so, the process should be identified. This rejection is respectfully traversed.

From the explanations provided above in reply to the written description rejection, and the above-discussed clarifying amendment made to claim 69, the claim recitation in question does not relate to removal of some portion of the sample. Those explanations are also applicable here, and reference is made thereto. The previous wording and the present wording would be clear to one skilled in the art, which is the standard under 35 U.S.C. §112, second paragraph, as well as in M.P.E.P. §2173.04. Further, the scope and definiteness of this claim is quite clear, and the Examiner has provided no other reasoning for the rejection of this claim other than the question raised by the Examiner, which has been addressed. Therefore, claim 69 sets forth what applicants regard as their invention with a reasonable degree of precision and particularity, and satisfies the requirements of 35 U.S.C. §112, second paragraph.

Accordingly, this rejection should be withdrawn.

**Rejection of claims 1, 7-12, 14, 16-25, and 69 under 35 U.S.C. §102(e) – Mansky**

Claims 1, 7-12, 14, 16-25, and 69 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. 2003/0097871 A1 to Mansky (hereinafter “Mansky”).

At page 3 of the Office Action, the Examiner stated that Mansky teaches, in paragraph [0006], a method for screening an array of sample materials for a desired specific property, and each sample is subjected to one or more forces and the response to the forces is monitored and correlated to each sample materials. The Examiner further stated that paragraphs [0015]-[0021] teach identifying each sample by a tag and subjecting the samples to forces such as viscosity, surface tension and interfacial tensions. The Examiner also stated with regard to new claim 69 that the Office maintains Mansky teaches, in paragraphs [0015]-[0021], identifying the physical properties relating to viscosity, surface tension and interfacial tensions which are indistinguishable from the instant claims. This rejection is respectfully traversed.

The present invention does not relate to any method of binary code tagging with a particle that may or may not be shown in Mansky. Mansky is not at all relevant to the subject matter of the claimed invention. As recited in claim 1, the present invention is directed to a method for identifying a product specification for a batch, lot, or shipment of particulate material which involves measuring an interfacial potential property value for the batch, lot, or shipment of particulate material. Present claim 69 has similar recitations as claim 1 and further recites the interfacial potential property value is a measurement of at least one physical property of the material that depends on the interaction of the particulate with at least one other material or itself, *after the effects of morphology have been removed*. The interfacial potential property value can be included on a product specification sheet for the brand or grade of particulate material. The present invention is useful in resolving a serious problem associated with particulate material production in which particulate materials that are seemingly made "within spec" with respect to one or more measures of morphology, such as particle size, surface area, structure, porosity, etc., nonetheless do not perform consistently as expected in customer applications. The method of the present invention involves the

step of measuring at least one interfacial potential property value to the lot, batch, sample, and/or shipment of particulate material to help insure that customers receive particulate materials that not only are "within spec" relative to morphological properties and the like, but which also will perform consistently and reliably in applications. Oftentimes, a customer and/or a supplier will agree on specifications for a unit of product that may be included in a contractual agreement, purchase order, invoice, contract, waiver to a contract, or combinations thereof. In various embodiments of the present invention, the product specification that includes at least one interfacial potential property value also can be included as part of such materials. Mansky does not teach any method for creating a product specification having the combination of features as recited in claim 1 or claim 69.

As explained in the applicants' previous response, Example 2 of the present application provides one example of the immense benefits provided by the present invention, and reference is again made to those explanations. As shown in Example 2, using previously known ways to specify carbon black, the "same grade of carbon black" from four manufacturing plants was analyzed with respect to conventional morphological values. In the Office Action, the Examiner states that the Office understands samples "A"- "E" of Example 2 all are within 96% of the "max DBP" value but "vary more widely" with other tests. That is precisely the point. As shown by the test results in paragraph [0062]( including Table 3) and as explained in paragraph [0063] of the present application, the measurement of maximum torque on the carbon black samples as a "max DBP" value gave a flawed "within spec" result. In particular, a "max DBP" value was measured for the four samples and it was noted that, in each case, the morphological value was essentially the same and, therefore, in the past, would have been considered "the same grade of carbon black" using conventional criteria for creating carbon black. However, and as noted by the

Examiner, the other test results in Example 2 , *i.e.*, the volume at maximum torque measurements using the different fluids of EG, 60%EG, and Water, varied significantly from carbon black to carbon black from each plant. Thus, based on this additional criteria, the four samples were not the same, and technically are not the same grade of carbon black. In particular, these test results reveal and show that the determination of maximum torque via “max DBP” measured only a morphological property, but not an interfacial potential property, as that term is defined in the present application and used in the present claims. On the other hand, the test results of Example 2 also show that measurement of maximum torque on the carbon black samples with EG, 60%EG, or Water, are measurements of an interfacial potential property of the carbon black samples. Interfacial potential property values using those properties thus can provide a more reliable QC and/or QA monitoring of the carbon black samples, unlike “max DBP”. Therefore, Example 2 *is* commensurate in scope with the pending claims that require “at least one interfacial property.” Examples 3-5 at pages 22-25 of the present application provide additional illustrations of methods for evaluating whether a physical property or phenomenon of particulate samples is, or is not, an interfacial potential property with respect to them.

As can be appreciated, the present invention essentially takes the specification of particulate material, such as carbon black, to a new higher level of specification and accuracy, which did not exist prior to the present invention. As explained in the applicants’ previous response and further below, Mansky is entirely irrelevant to this process of identifying a product specification and merely relates to physically tagging materials for screening purposes. The product specification used in the present claims is not taught or even suggested in Mansky and, actually, Mansky uses conventional properties to simply screen the particulates.

In more detail, Mansky describes a method for screening an array of materials for mechanical or physical characteristics such as surface tension or interfacial tension (Abstract; paragraphs [0005], [0006], [0055], [0070]-[0071]). In contrast to the presently claimed invention, Mansky does not teach any method for identifying a product specification for a batch, lot, or shipment of particulate material comprising measuring and obtaining at least one interfacial potential property value for the batch, lot, or shipment of particulate material. The measurements of surface tension or interfacial tension in Mansky are not measurements of an interfacial potential property as defined in the present application and recited in the present claims. Further, according to paragraph [0016] of Mansky, support beads or pellets are coated with the component(s) of interest, wherein the bead or pellet can be identified with a tag, such as an etched binary bar code used to indicate the history of the bead or pellet, i.e., to identify which components were deposited thereon.

As indicated, the Office Action also stated that Mansky teaches carbon black and silica in paragraphs [0055] and [0058] thereof. However, Mansky does not connect those non-polymer sample options with the coated bead or pellets of paragraph [0016], nor is there any reasoning provided in the Office Action that would connect those dry particulate or powder materials with the coated bead or pellet of paragraph [0016]. As explained by Mansky, the preferred embodiment of the reference is directed to screening *polymer* samples, which is a material that can be formed in situ on a substrate (e.g., see paragraphs [0038]-[0045]). There is no evidence for, or apparent reason to think, that the coated bead or pellet of Mansky would encompass the carbon black and silica samples. Therefore, Mansky's etched bead methodology does not address or solve the problem of particulate materials that appear to be "within spec" but do not perform consistently in end-use applications, as provided by the present invention. Mansky provides no recognition of that

problem, nor inherently solves it in the same manner as the present claims by the screening methods that are taught therein.

In view of the many differences that exist between Mansky and the present claims, Mansky fails to identically disclose the features of the claims. In the absence of an identical disclosure, Mansky can not anticipate the claims.

For these reasons, this rejection should be withdrawn.

### **CONCLUSION**

In view of the foregoing remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 03-0060. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Luke A. Kilyk', with a stylized flourish at the end.

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